REMARKS

The Examiner is thanked for the performance of a thorough search. By this response, Claims 29, 34, 42, 50, and 51 have been amended. Claims 33 and 49 have been canceled. Hence, Claims 29–32, 34–36, 38–48, and 50–54 are pending in this application.

The added claims and amendments to the claims do not add any new matter to this application and are supported by the Specification as originally filed. **The amendments involve nothing more than incorporating subject matter from former dependent claims into independent claims. Thus, no new search is required.** All issues raised in the Office Action are addressed hereinafter.

I. CLAIM REJECTIONS BASED ON 35 U.S.C. § 103

Claims 29-36 and 38-54 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 7,036,020 to Thibadeau ("*Thibadeau*") and further in view of PCT Publication No. WO 03/003242 to Hearn et al. ("*Hearn*"). Applicants traverse the rejection. Reconsideration is respectfully requested.

INDEPENDENT CLAIM 29

Claim 29 recites among other elements:

> a security partition formed in the storage device, the operating system being stored in the security partition; and
> a security device comprising a hardware processor or controller for intercepting communications and **selectively blocking access to operating system data** between the host CPU and the security partition;
> wherein the security device is deployed along the chain of components that connect the host CPU to the storage device;
> wherein the security device's processor or controller is distinct from the host CPU; and

wherein **during operation of the operating system** the **security device** is arranged to **divert and write operating system files to a location different than the security partition** so that normal operation of the operating system continues even though operating system files in the secure partition have not been updated.

The cited references fail to teach or suggest at least the above bolded elements of Claim 29.

(1) The references do not "selectively block[] access to operating system data"

The security device of Claim 29 selectively blocks access to operating system data. The Office Action alleges that *Thibadeau* describes such a security device. As Applicants have repeatedly explained in their previous responses, *Thibadeau* does not describe such a feature. In fact, *Thibadeau* depicts the operating system as being stored outside of the security partition. *See, e.g., Thibadeau* at FIG. 3. ***Thibadeau*'s security mechanism cannot possibly block access to an operating system that is stored entirely outside of the security partition.**

The Office Action on page 2 appears to allege that *Thibadeau* describes this feature because "access to [a] security partition of [a] storage device is limited by the installed operating system." However, the Office Action appears to be mistaken as to what Claim 29 recites. Claim 29 does not recite that an operating system limits access to a security partition, as described in *Thibadeau*. Rather, Claim 29 recites that a security device limits access to an operating system.

In effect, the Office Action appears to be ignoring the term "operating system" in the claim. That is, the Office Action has identified references that involve selectively blocking access to data. The Office Action has then made the unsubstantiated assumption that, from these references, one skilled in the art would have been taught to block any and all types of data, including "operating system" data. This assumption is incorrect and legally erroneous. None of

the references describe that their techniques are specifically applicable to blocking operating system data. Nor would one skilled in the art have suspected that the techniques could be applied to the context of operating system data. Rather, absent improvements such as claimed by Applicants, one skilled in the art would have expected that the blocking of operating system files would likely have rendered the entire computer inoperable.

For at least these reasons, then, the Office Action errs in alleging that the cited references describe "selectively blocking access to operating system data," as recited in Claim 29.

(2) The references do not "divert . . . operating system files to a location different than the security partition."

Notwithstanding the errors explained above in the Office Action's rejection of Claim 29, Applicants have further amended Claim 29 in the interest of expediting prosecution. Specifically, Applicants have amended Claim 29 to describe a specific configuration of a security device that permits the normal operation of an operating system while selectively blocking access to the operating system data. That is, Claim 29 recites that, "during operation of the operating system, the security device is arranged to **divert and write operating system files to a location different than the security partition.**" This arrangement permits "normal operation of the operating system continues even though operation system files in the secure partition have not been updated." In this way, the operating system itself is protected from undesired modification.

There is no disclosure of this feature in *Thibadeau* or *Hearn*.

Thibadeau describes a system for securing information in a computer system. Column 3, lines 33 to 46 indicate that the invention described in *Thibadeau* is for a computer system "provided with an operating system in operative association with at least one storage device,

wherein the storage device includes firmware and a processor for processing data stored on the storage device." According to the described method, at least one security partition is created in and access is restricted to at least a portion of the storage device by the operating system (column 3, lines 37 to 39).

Referring to Figures 3 and 4 and associated passages in the description of *Thibadeau* in column 5, line 25 to column 6, line 16, a storage device 30 is provided that has a security partition including security partition data 32, and an operating system file system 42 separate to the security partition and the security partition data 32. Indeed, the security partition of the operating system are shown separate in Figure 3.

Column 5, line 43 to 50 states:

> "as shown, an operating system ("OS") file system 42 is not permitted to access the security partition data 32 contained in the storage device 30. This independence of the security partition data 32 from the OS file system 42 provides an important benefit of the present security methods and systems: to create a location on a computer system where information such as a secret can be effectively concealed."

Accordingly, it is clear from this description and Figures 3 and 4 that the operating system and the security partition are separate and, as such, there is no disclosure in *Thibadeau* of storing the operating system in the security partition. Rather, *Thibadeau* is concerned with controlling access by the operating system to data stored on the security partition. This is quite different to storing the operating system in the security partition for the purpose of preventing undesired modification to the operating system itself.

The Office Action nonetheless alleged that column 5, line 25 to column 6, line 16 of *Thibadeau* described a similar feature previously recited in Claim 33. This passage from *Thibadeau* describes the following:

i) A storage device 30 with security partition (SP) data 32 and at least one authority record 34.

ii) The security partition data and authority records are contained in a security partition of the storage device 30.

iii) Operations involving the authority records are managed by firmware of the storage device.

iv) The operating system file system 42 is not permitted to access the security partition data 32 contained in the storage device.

The authority record is related to information for which concealment is desired and/or functionality that promotes secure data processing in a computer system.

Accordingly, there is no reference, teaching or suggestion in this section of *Thibadeau* of "diverting and writing operating system files to a location different than the security partition" on which the operating system is stored "so that normal operation of the operating system continues even though operating system files in the secure partition have not been updated."

There is also no disclosure in *Hearn* of a security partition in which an operating system is stored, and thus *Hearn* also cannot teach or suggest the above recited feature. The Office Action nonetheless alleges that page 15, lines 2 to 8, and page 5, line 24 to page 17, line 8 of *Hearn* describe the above recited feature.

Page 15, lines 2 to 8 of *Hearn* describes interposing a security device 35 in line with an ATA cable 33 and storage devices 21. *Hearn* further describes in this passage that the ATA

standard supports various types of storage devices including hard drives, CD-Rom, flash memory, and so on. There is no reference at all in this passage to diverting and writing operating system files as defined in the new independent claims.

Pages 5 to 17 of *Hearn* disclose various features of a security system for a computer, in particular blocking and controlling access by a host CPU to a data storage device before and after initialization of the computer. However, there is no reference, teaching or suggestion of storing an operating system in a security partition, nor of diverting and writing operating system files to a location different to the security partition so that normal operation of the operating system continues even though operating system files in the secure partition have not been updated. *Hearn* is completely silent in this regard.

For at least the foregoing reasons, the combination of *Thibadeau* and *Hearn* fails to provide the complete subject matter recited in independent Claim 29. Therefore, the combination of *Thibadeau* and *Hearn* would not have rendered Claim 29 obvious under 35 U.S.C. § 103. Reconsideration is respectfully requested.

REMAINING CLAIMS

Each of the remaining claims recites or depends from a claim that recites at least one of the above-discussed features. As discussed above, the combination of *Thibadeau* and *Hearn* fails to teach or suggest the above-discussed features. The remaining cited references also do not appear to teach, and are not alleged to teach, the above-discussed features. Consequently, the combination of *Thibadeau* and *Hearn* fails to teach or suggest the complete subject matter of the remaining claims.

Moreover, the remaining pending claims include additional elements that the cited references also do not teach or suggest. However, to expedite prosecution, arguments concerning these additional elements are not provided at this time. Applicants reserve the right to further point out the differences between the cited art and these additional novel elements.

II. CONCLUSION

For the reasons set forth above, all of the pending claims are now in condition for allowance. The Examiner is respectfully requested to contact Applicants' representative by telephone relating to any issue that would advance examination.

A petition for extension of time, to the extent necessary to make this reply timely filed, is hereby made. If applicable, the fee for the petition for extension of time fee and other applicable fees is enclosed herewith. If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to charge any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,
HICKMAN PALERMO TRUONG & BECKER LLP

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/KarlTRees#58983/
Karl T. Rees, Reg. No. 58,983

2055 Gateway Place, Suite 550
San Jose, CA 95110
(408) 414-1233
Facsimile: (408) 414-1076